

EXHIBIT A

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IN CASES AND MATTERS



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Section 1

(1) 1 10 20 30 40 52
 SEQ ID NO:3 (1) MCVPRSGILSLCICLYCGVLLPVLLPNLPFLTCLSMSTLESVTYLPEKGLYC
 SEQ ID NO:4 (1) -----MSTLESVTYLPEKGLYC
 SEQ ID NO:5 (1) -----
 SEQ ID NO:6 (1) -----
 SEQ ID NO:7 (1) -----
 SEQ ID NO:8 (1) -----MSKPGKPTLNHGLV
 SEQ ID NO:9 (1) -----
 SEQ ID NO:10 (1) -----
 Consensus (1)

Section 2

(53) 53 60 70 80 90 104
 SEQ ID NO:3 (53) QRLPSSRTHGGTESLKGKNTENMGFYGTLMKMFYKMKRKLDHGSEVRSFSLG
 SEQ ID NO:4 (18) QRLPSSRTHGGTESLKGKNTENMGFYGTLMKMFYKMKRKLDHGSEVRSFSLG
 SEQ ID NO:5 (1) -----MGFYGTLMKMFYKMKRKLDHGSEVRSFSLG
 SEQ ID NO:6 (1) -----MKMFYKMKRKLDHGSEVRSFSLG
 SEQ ID NO:7 (1) -----MKRKLDHGSEVRSFSLG
 SEQ ID NO:8 (15) PVDLKSACEPLPHQTVMKIFSIISIIAQGLPFCRRMKRKLDHGSEVRSFSLG
 SEQ ID NO:9 (1) -----MKIFSIISIIAQGLPFCRRMKRKLDHGSEVRSFSLG
 SEQ ID NO:10 (1) -----MKRKLDHGSEVRSFSLG
 Consensus (53) K L MIFYKMKRKLDHGSEVRSFSLG

Section 3

(105) 105 110 120 130 140 156
 SEQ ID NO:3 (105) KKPCKVSEYTSTTGLVPCSATPTTFGDLRAANGQGQRRRITSVQPPTGLQE
 SEQ ID NO:4 (70) KKPCKVSEYTSTTGLVPCSATPTTFGDLRAANGQGQRRRITSVQPPTGLQE
 SEQ ID NO:5 (31) KKPCKVSEYTSTTGLVPCSATPTTFGDLRAANGQGQRRRITSVQPPTGLQE
 SEQ ID NO:6 (23) KKPCKVSEYTSTTGLVPCSATPTTFGDLRAANGQGQRRRITSVQPPTGLQE
 SEQ ID NO:7 (18) KKPCKVSEYTSTTGLVPCSATPTTFGDLRAANGQGQRRRITSVQPPTGLQE
 SEQ ID NO:8 (67) KKPCKVSEYTSTTGLVPCSATPTTFGDLRAANGQGQRRRITSVQPPTGLQE
 SEQ ID NO:9 (37) KKPCKVSEYTSTTGLVPCSATPTTFGDLRAANGQGQRRRITSVQPPTGLQE
 SEQ ID NO:10 (18) KKPCKVSEYTSTTGLVPCSATPTTFGDLRAANGQGQRRRITSVQPPTGLQE
 Consensus (105) KKPCKVSEYTSTTGLVPCSATPTTFGDLRAANGQGQRRRITSVQPPTGLQE

Section 4

(157) 157 170 180 190 208
 SEQ ID NO:3 (157) WLKMFQSWSGPEKLLALDELIDSCEPTQVKHMMQVIEPQFQRDFISLLPKEL
 SEQ ID NO:4 (122) WLKMFQSWSGPEKLLALDELIDSCEPTQVKHMMQVIEPQFQRDFISLLPKEL
 SEQ ID NO:5 (83) WLKMFQSWSGPEKLLALDELIDSCEPTQVKHMMQVIEPQFQRDFISLLPKEL
 SEQ ID NO:6 (75) WLKMFQSWSGPEKLLALDELIDSCEPTQVKHMMQVIEPQFQRDFISLLPKEL
 SEQ ID NO:7 (70) WLKMFQSWSGPEKLLALDELIDSCEPTQVKHMMQVIEPQFQRDFISLLPKEL
 SEQ ID NO:8 (119) WLKMFQSWSGPEKLLALDELIDSCEPTQVKHMMQVIEPQFQRDFISLLPKEL
 SEQ ID NO:9 (89) WLKMFQSWSGPEKLLALDELIDSCEPTQVKHMMQVIEPQFQRDFISLLPKEL
 SEQ ID NO:10 (70) WLKMFQSWSGPEKLLALDELIDSCEPTQVKHMMQVIEPQFQRDFISLLPKEL
 Consensus (157) WLKMFQSWSGPEKLLALDELIDSCEPTQVKHMMQVIEPQFQRDFISLLPKEL

Section 5

	(209)	209	220	230	240	250	260
SEQ ID NO:3	(209)	ALYVLSFLEPKDLLQAAQTCRYWRILAEDNLLWREKCKEEGIDEPLHIKRRK					
SEQ ID NO:4	(174)	ALYVLSFLEPKDLLQAAQTCRYWRILAEDNLLWREKCKEEGIDEPLHIKRRK					
SEQ ID NO:5	(135)	ALYVLSFLEPKDLLQAAQTCRYWRILAEDNLLWREKCKEEGIDEPLHIKRRK					
SEQ ID NO:6	(127)	ALYVLSFLEPKDLLQAAQTCRYWRILAEDNLLWREKCKEEGIDEPLHIKRRK					
SEQ ID NO:7	(122)	ALYVLSFLEPKDLLQAAQTCRYWRILAEDNLLWREKCKEEGIDEPLHIKRRK					
SEQ ID NO:8	(171)	ALYVLSFLEPKDLLQAAQTCRYWRILAEDNLLWREKCKEEGIDEPLHIKRRK					
SEQ ID NO:9	(141)	ALYVLSFLEPKDLLQAAQTCRYWRILAEDNLLWREKCKEEGIDEPLHIKRRK					
SEQ ID NO:10	(122)	ALYVLSFLEPKDLLQAAQTCRYWRILAEDNLLWREKCKEEGIDEPLHIKRRK					
Consensus	(209)	ALYVLSFLEPKDLLQAAQTCRYWRILAEDNLLWREKCKEEGIDEPLHIKRRK					

Section 6

	(261)	261	270	280	290	300	312
SEQ ID NO:3	(261)	VIKPGFIHSPWKSAYIRQHRIDTNWRRGELKSPKVLKGHDDHVITCLQFCGN					
SEQ ID NO:4	(226)	VIKPGFIHSPWKSAYIRQHRIDTNWRRGELKSPKVLKGHDDHVITCLQFCGN					
SEQ ID NO:5	(187)	VIKPGFIHSPWKSAYIRQHRIDTNWRRGELKSPKVLKGHDDHVITCLQFCGN					
SEQ ID NO:6	(179)	VIKPGFIHSPWKSAYIRQHRIDTNWRRGELKSPKVLKGHDDHVITCLQFCGN					
SEQ ID NO:7	(174)	VIKPGFIHSPWKSAYIRQHRIDTNWRRGELKSPKVLKGHDDHVITCLQFCGN					
SEQ ID NO:8	(223)	VIKPGFIHSPWKSAYIRQHRIDTNWRRGELKSPKVLKGHDDHVITCLQFCGN					
SEQ ID NO:9	(193)	VIKPGFIHSPWKSAYIRQHRIDTNWRRGELKSPKVLKGHDDHVITCLQFCGN					
SEQ ID NO:10	(174)	VIKPGFIHSPWKSAYIRQHRIDTNWRRGELKSPKVLKGHDDHVITCLQFCGN					
Consensus	(261)	VIKPGFIHSPWKSAYIRQHRIDTNWRRGELKSPKVLKGHDDHVITCLQFCGN					

Section 7

	(313)	313	320	330	340	350	364
SEQ ID NO:3	(313)	RIVSGSDDNTLKVWSAVTGKCLRTL VGHTGGVWSSQMRDNI IISGSTDRTLK					
SEQ ID NO:4	(278)	RIVSGSDDNTLKVWSAVTGKCLRTL VGHTGGVWSSQMRDNI IISGSTDRTLK					
SEQ ID NO:5	(239)	RIVSGSDDNTLKVWSAVTGKCLRTL VGHTGGVWSSQMRDNI IISGSTDRTLK					
SEQ ID NO:6	(231)	RIVSGSDDNTLKVWSAVTGKCLRTL VGHTGGVWSSQMRDNI IISGSTDRTLK					
SEQ ID NO:7	(226)	RIVSGSDDNTLKVWSAVTGKCLRTL VGHTGGVWSSQMRDNI IISGSTDRTLK					
SEQ ID NO:8	(275)	RIVSGSDDNTLKVWSAVTGKCLRTL VGHTGGVWSSQMRDNI IISGSTDRTLK					
SEQ ID NO:9	(245)	RIVSGSDDNTLKVWSAVTGKCLRTL VGHTGGVWSSQMRDNI IISGSTDRTLK					
SEQ ID NO:10	(226)	RIVSGSDDNTLKVWSAVTGKCLRTL VGHTGGVWSSQMRDNI IISGSTDRTLK					
Consensus	(313)	RIVSGSDDNTLKVWSAVTGKCLRTL VGHTGGVWSSQMRDNI IISGSTDRTLK					

Section 8

	(365)	365	370	380	390	400	416
SEQ ID NO:3	(365)	VWNAETGECIHTLYGHTSTVRCMHLHEKRVVSGSRDATLRVWDIETGQCLHV					
SEQ ID NO:4	(330)	VWNAETGECIHTLYGHTSTVRCMHLHEKRVVSGSRDATLRVWDIETGQCLHV					
SEQ ID NO:5	(291)	VWNAETGECIHTLYGHTSTVRCMHLHEKRVVSGSRDATLRVWDIETGQCLHV					
SEQ ID NO:6	(283)	VWNAETGECIHTLYGHTSTVRCMHLHEKRVVSGSRDATLRVWDIETGQCLHV					
SEQ ID NO:7	(278)	VWNAETGECIHTLYGHTSTVRCMHLHEKRVVSGSRDATLRVWDIETGQCLHV					
SEQ ID NO:8	(327)	VWNAETGECIHTLYGHTSTVRCMHLHEKRVVSGSRDATLRVWDIETGQCLHV					
SEQ ID NO:9	(297)	VWNAETGECIHTLYGHTSTVRCMHLHEKRVVSGSRDATLRVWDIETGQCLHV					
SEQ ID NO:10	(278)	VWNAETGECIHTLYGHTSTVRCMHLHEKRVVSGSRDATLRVWDIETGQCLHV					
Consensus	(365)	VWNAETGECIHTLYGHTSTVRCMHLHEKRVVSGSRDATLRVWDIETGQCLHV					

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Section 9

	(417)	417	430	440	450	468
SEQ ID NO:3 (417)	LMGHVAAVRCVQYD	GRRVVSGAYDF	FMVKVWDPETET	CLHTLQGH	TNRVYSLQ	
SEQ ID NO:4 (382)	LMGHVAAVRCVQYD	GRRVVSGAYDF	FMVKVWDPETET	CLHTLQGH	TNRVYSLQ	
SEQ ID NO:5 (343)	LMGHVAAVRCVQYD	GRRVVSGAYDF	FMVKVWDPETET	CLHTLQGH	TNRVYSLQ	
SEQ ID NO:6 (335)	LMGHVAAVRCVQYD	GRRVVSGAYDF	FMVKVWDPETET	CLHTLQGH	TNRVYSLQ	
SEQ ID NO:7 (330)	LMGHVAAVRCVQYD	GRRVVSGAYDF	FMVKVWDPETET	CLHTLQGH	TNRVYSLQ	
SEQ ID NO:8 (379)	LMGHVAAVRCVQYD	GRRVVSGAYDF	FMVKVWDPETET	CLHTLQGH	TNRVYSLQ	
SEQ ID NO:9 (349)	LMGHVAAVRCVQYD	GRRVVSGAYDF	FMVKVWDPETET	CLHTLQGH	TNRVYSLQ	
SEQ ID NO:10 (330)	LMGHVAAVRCVQYD	GRRVVSGAYDF	FMVKVWDPETET	CLHTLQGH	TNRVYSLQ	
Consensus (417)	LMGHVAAVRCVQYD	GRRVVSGAYDF	FMVKVWDPETET	CLHTLQGH	TNRVYSLQ	

Section 10

	(469)	469	480	490	500	510	520
SEQ ID NO:3 (469)	FDGIHVVSGSLD	TSIRVWDVETG	NCIHTLTGH	QSLTSGMEL	KDNILVSG	NAD	
SEQ ID NO:4 (434)	FDGIHVVSGSLD	TSIRVWDVETG	NCIHTLTGH	QSLTSGMEL	KDNILVSG	NAD	
SEQ ID NO:5 (395)	FDGIHVVSGSLD	TSIRVWDVETG	NCIHTLTGH	QSLTSGMEL	KDNILVSG	NAD	
SEQ ID NO:6 (387)	FDGIHVVSGSLD	TSIRVWDVETG	NCIHTLTGH	QSLTSGMEL	KDNILVSG	NAD	
SEQ ID NO:7 (382)	FDGIHVVSGSLD	TSIRVWDVETG	NCIHTLTGH	QSLTSGMEL	KDNILVSG	NAD	
SEQ ID NO:8 (431)	FDGIHVVSGSLD	TSIRVWDVETG	NCIHTLTGH	QSLTSGMEL	KDNILVSG	NAD	
SEQ ID NO:9 (401)	FDGIHVVSGSLD	TSIRVWDVETG	NCIHTLTGH	QSLTSGMEL	KDNILVSG	NAD	
SEQ ID NO:10 (382)	FDGIHVVSGSLD	TSIRVWDVETG	NCIHTLTGH	QSLTSGMEL	KDNILVSG	NAD	
Consensus (469)	FDGIHVVSGSLD	TSIRVWDVETG	NCIHTLTGH	QSLTSGMEL	KDNILVSG	NAD	

Section 11

	(521)	521	530	540	550	560	572
SEQ ID NO:3 (521)	STVKIWDIKTGQ	CLQTLQGP	NKHQSAVTCL	QFNKNFVIT	SSDDGTVKL	WDLK	
SEQ ID NO:4 (486)	STVKIWDIKTGQ	CLQTLQGP	NKHQSAVTCL	QFNKNFVIT	SSDDGTVKL	WDLK	
SEQ ID NO:5 (447)	STVKIWDIKTGQ	CLQTLQGP	NKHQSAVTCL	QFNKNFVIT	SSDDGTVKL	WDLK	
SEQ ID NO:6 (439)	STVKIWDIKTGQ	CLQTLQGP	NKHQSAVTCL	QFNKNFVIT	SSDDGTVKL	WDLK	
SEQ ID NO:7 (434)	STVKIWDIKTGQ	CLQTLQGP	NKHQSAVTCL	QFNKNFVIT	SSDDGTVKL	WDLK	
SEQ ID NO:8 (483)	STVKIWDIKTGQ	CLQTLQGP	NKHQSAVTCL	QFNKNFVIT	SSDDGTVKL	WDLK	
SEQ ID NO:9 (453)	STVKIWDIKTGQ	CLQTLQGP	NKHQSAVTCL	QFNKNFVIT	SSDDGTVKL	WDLK	
SEQ ID NO:10 (434)	STVKIWDIKTGQ	CLQTLQGP	NKHQSAVTCL	QFNKNFVIT	SSDDGTVKL	WDLK	
Consensus (521)	STVKIWDIKTGQ	CLQTLQGP	NKHQSAVTCL	QFNKNFVIT	SSDDGTVKL	WDLK	

Section 12

	(573)	573	580	590	600	610	624
SEQ ID NO:3 (573)	TGEFIRNLVTLE	SGSGGVWRIR	ASNTKLVC	AVGSRNGTE	ETKLLVL	DFDV	
SEQ ID NO:4 (538)	TGEFIRNLVTLE	SGSGGVWRIR	ASNTKLVC	AVGSRNGTE	ETKLLVL	DFDV	
SEQ ID NO:5 (499)	TGEFIRNLVTLE	SGSGGVWRIR	ASNTKLVC	AVGSRNGTE	ETKLLVL	DFDV	
SEQ ID NO:6 (491)	TGEFIRNLVTLE	SGSGGVWRIR	ASNTKLVC	AVGSRNGTE	ETKLLVL	DFDV	
SEQ ID NO:7 (486)	TGEFIRNLVTLE	SGSGGVWRIR	ASNTKLVC	AVGSRNGTE	ETKLLVL	DFDV	
SEQ ID NO:8 (535)	TGEFIRNLVTLE	SGSGGVWRIR	ASNTKLVC	AVGSRNGTE	ETKLLVL	DFDV	
SEQ ID NO:9 (505)	TGEFIRNLVTLE	SGSGGVWRIR	ASNTKLVC	AVGSRNGTE	ETKLLVL	DFDV	
SEQ ID NO:10 (486)	TGEFIRNLVTLE	SGSGGVWRIR	ASNTKLVC	AVGSRNGTE	ETKLLVL	DFDV	
Consensus (573)	TGEFIRNLVTLE	SGSGGVWRIR	ASNTKLVC	AVGSRNGTE	ETKLLVL	DFDV	

(625) 6827

SEQ ID NO:3 (625) DMK
SEQ ID NO:4 (590) DMK
SEQ ID NO:5 (551) DMK
SEQ ID NO:6 (543) DMK
SEQ ID NO:7 (538) DMK
SEQ ID NO:8 (587) DMK
SEQ ID NO:9 (557) DMK
SEQ ID NO:10 (538) DMK
Consensus (625) DMK

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